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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,557	04/28/2006	Shinsuke Matsumoto	1033622-000022	8186
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EXAMINER				
WINKLER, MELISSA A				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
09/18/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

# Office Action Summary

**Application No.**

10/577,557

**Applicant(s)**

MATSUMOTO ET AL.

**Examiner**

MELISSA WINKLER

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 11/22/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1 - 10** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent Claims 1 and 4 set forth the amine compounds of formulas (1) and (2). However, it is unclear whether the limitations surrounded with parentheses which pertain to the R groups in the formulas – for example, “(wherein R<sup>1</sup>...alkenyl group of 1 to 4 carbon atoms)” – are required or optional parts of the claims. For the purposes of further examination, the claims will be interpreted wherein the limitations pertaining to the R groups are required limitations in the instant claims.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 3, 5, and 8 - 10** are rejected under 35 U.S.C. 102(b) as being anticipated by WO 01/07521 to Parfondry et al.

**Regarding Claims 1 and 3.** Parfondry et al. teach a flexible polyurethane obtained by the reaction of a polyisocyanate and polyol composition. The polyol composition contains a polyoxypropylene polyol (Polyol b3) prepared with an amine initiator, such as 1-(2-aminoethyl)piperazine, and possessing a hydroxyl (OH) value of greater than 400 to 600 (Page 8, Lines 9 – 28; Page 10, Line 33 – Page 11, Line 10).

While Parfondry et al. are silent regarding the amine value of Polyol b3, Parfondry et al. teach a composition prepared with the claimed ingredients and specifically claimed amine compound. Parfondry et al. further teach the composition is used to prepare a flexible polyurethane foam. It is thus the Office's position that it would be reasonably expected that the amine-initiated polyether polyol taught by Parfondry et al. would have an amine value in the claimed range of 400 to 600 mg KOH/g. .

**Regarding Claim 5.** Parfondry et al. teach the foam of Claim 3 may be used in the automotive industry as seating (Page 12, Lines 21 – 25).

**Regarding Claim 8.** Parfondry et al. teach the foam of Claim 5. Parfondry et al. teach the presence of Polyol b3 prevents the release of amine-containing compounds from the foam (Column 8, Lines 9 – 16) but are silent regarding a specific amount of volatile amine components in the foam. Consequently, the Office recognizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s). Therefore, the claimed effects and physical properties, i.e. an amine-initiated polyether polyol with an amine value of 400 to 600 mg KOH/g, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with *only* the claimed ingredients.

**Regarding Claim 9.** Parfondry et al. teach the foam of Claim 3 has very good damping properties (Column 12, Lines 26 – 27).

**Regarding Claim 10.** Parfondry et al. teach the foam of Claim 3. Parfondry et al. teach the presence of Polyol b3 prevents the release of amine-containing compounds from the foam (Column 8, Lines 9 – 16) but are silent regarding a specific amount of

volatile amine components in the foam. Consequently, the Office recognizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s). Therefore, the claimed effects and physical properties, i.e. an amine-initiated polyether polyol with an amine value of 400 to 600 mg KOH/g, would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with *only* the claimed ingredients.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/07521 to Parfondry et al., as applied to Claim 1 above.

**Regarding Claim 2.** Parfondry et al. teach the foam of Claim 1 wherein the polyol composition comprises 20 – 70% weight Polyol b1, 5 - 50% weight Polyol b2, and 5 - 50% weight Polyol b3 described in Claim 1 above. Polyols b1 and b2 are polyether polyols with functionalities between 2 and 6 (Page 3, Lines 1 – 17). Polyols b1 and b2 used in the examples have hydroxyl numbers of 42 and 28, respectively (Page 13, Lines 29 – 34).

Parfondry et al. do not teach Polyol b3 comprises 0.5 – 3 parts by weight of the polyol component, as claimed. Parfondry et al. do, however, teach polymer-modified/polymer-dispersed polyols may further be added to the polyol composition (Page 9, Lines 1 - 11), though Parfondry et al. are silent regarding the amount that may be added. It is the Office's position that the presence of a polymer-modified polyol in the polyol composition would be reasonably expected to lower the proportion of Polyol b3 that comprises the polyol composition. Furthermore, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 220 F.2d 454, 105, 105 USPQ 233 (CCPA 1955) (MPEP 2144.05) At the time of the invention, it would have been obvious to a person of ordinary skill in the art to optimize the amount of Polyol b3 to obtain a polyurethane foam product with sufficient flexibility for its intended use. A prima facie case of obviousness may be rebutted, however, where the

results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 617 F.2d 272, 205, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05)

**Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/07521 to Parfondry et al., as applied to Claims 1, 3, and 5 above, and further in view of US 6,087,410 to Falke et al.

**Regarding Claims 6 and 7.** Parfondry et al. teach the seating of Claim 5 but do not teach its hardness and wet heat compression set ratio. Consequently, the Office recognizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredient(s). Therefore, the claimed effects and physical properties - i.e. a foam seat with a 25% LID hardness between 150 to 300 or 50 to 200 N/314 cm<sup>2</sup> and a wet heat compression set ratio of not greater than 20% - would implicitly be achieved by a composition with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed properties with *only* the claimed ingredients.



Parfondry et al. also do not teach the density of the foam prepared according to Claim 5. However, Falke et al. also teach a polyurethane foam prepared with a density in the range preferably from 25 to 50 kg/m<sup>3</sup> (Column 10, Lines 19 - 22). Parfondry et al. and Falke et al. are analogous art as they are from the same field of endeavor, namely flexible polyurethane foams. At the time of invention, it would have been obvious to a person of ordinary skill in the art to add a blowing agent to the foam-forming composition taught by Parfondry et al. in an amount sufficient to prepare a foam with a density in the range taught by Falke et al. The motivation would have been that the density taught by Falke et al. would be a suitable density for automobile seat applications (Falke et al.: Column 10, Lines 19 – 25), an intended use for the foam taught by Parfondry et al. (Parfondry et al.: Page 12, Lines 21 – 25).

**Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/07521 to Parfondry et al.

**Regarding Claim 4.** Parfondry et al. teach a polyol composition comprising 20 – 70% weight Polyol b1, 5 - 50% weight Polyol b2, and 5 - 50% weight Polyol b3. Polyols b1 and b2 are polyether polyols with functionalities between 2 and 6 (Page 3, Lines 1 – 17). Polyols b1 and b2 used in the examples have hydroxyl numbers of 42 and 28, respectively (Page 13, Lines 29 – 34). Polyol b3 is a polyoxypropylene polyol prepared

with an amine initiator, such as 1-(2-aminoethyl)piperazine, and possessing a hydroxyl (OH) value of greater than 400 to 600 (Page 8, Lines 9 – 28; Page 10, Line 33 – Page 11, Line 10).

While Parfondry et al. are silent regarding the amine value of Polyol b3, Parfondry et al. teach a composition prepared with the claimed ingredients and specifically claimed amine compound. Parfondry et al. further teach the composition is used to prepare a flexible polyurethane foam. It is thus the Office's position that it could be reasonably expected that the amine-initiated polyether polyol taught by Parfondry et al. would have an amine value in the claimed range of 400 to 600 mg KOH/g. Parfondry et al. do not teach Polyol b3 comprises 0.5 – 3 parts by weight of the polyol component, as claimed. Parfondry et al. do, however, teach polymer-modified/polymer-dispersed polyols may further be added to the polyol composition (Page 9, Lines 1 - 11), though Parfondry et al. are silent regarding the amount that may be added. It is then the examiner's position that the presence of a polymer-modified polyol in the polyol composition would be reasonably expected to lower the proportion of Polyol b3 that comprises the polyol composition. Furthermore, the experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 220 F.2d 454, 105, 105 USPQ 233 (CCPA 1955) (MPEP 2144.05) At the time of the

invention, it would have been obvious to a person of ordinary skill in the art to optimize the amount of Polyol b3 to obtain a polyurethane foam product with sufficient flexibility for its intended use. A prima facie case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 617 F.2d 272, 205, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05)

#### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA WINKLER whose telephone number is (571)270-3305. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo, Ph.D./  
Supervisory Patent Examiner, Art Unit 1796  
14-Sep-08

MW  
September 12, 2008